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10/693,916	10/28/2003	Sang Ho Lee	SI-0044	3953
34610 7590 08/10/2009 KED & ASSOCIATES, LLP P.O. Box 221200 Chantilly, VA 20153-1200				
EXAMINER				
AHMED, SALMAN				
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2419				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/693,916

**Applicant(s)**

LEE, SANG HO

**Examiner**

SALMAN AHMED

**Art Unit**

2419

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 6/4/2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 7-15 and 17-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-15 and 17-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-5, 7-15 and 17-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to claim 1, lines 11-15 state:

"multiplexing the data RLP frame and voice RLP frame to form said at least one RLP frame; and transmitting said at least one RLP frame, wherein a type of the voice RLP frame is designated by information included in a frame type field or a control field not used for data in the data RLP frame."

It is unclear as to which frame (voice RLP frame, data RLP frame or an RLP frame) the limitations "a type of the voice RLP frame is designated by information included in a frame type field or a control field not used for data in the data RLP frame" is referring to. As such claim 1 is being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to claim 4, lines 9-14 state:

"designating a voice RLP frame type using one or more bit combinations in a frame type field not used for data in a data RLP frame, the voice RLP frame generated based on the voice data and the data RLP frame generated based on the packet data;

multiplexing the data RLP frame and voice RLP frame to form said at least one RLP frame; and transmitting said at least one RLP frame.”

It is unclear as to which frame (voice RLP frame, data RLP frame or an RLP frame) the limitations “designating a voice RLP frame type using one or more bit combinations in a frame type field not used for data in a data RLP frame” is referring to. As such, claim 4 is being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to claim 5, lines 9-14 state:

“designating a voice RLP frame type using one or more bit combinations in a control field not used for data in a data RLP frame, the voice RLP frame generated based on the voice data and the data RLP frame generated based on the packet data; multiplexing the data RLP frame and voice RLP frame to form said at least one RLP frame; and transmitting said at least one RLP frame.”

It is unclear as to which frame (voice RLP frame, data RLP frame or an RLP frame) the limitations “designating a voice RLP frame type using one or more bit combinations in a control field not used for data in a data RLP frame, the voice RLP frame generated based on the voice data and the data RLP frame generated based on the packet data” are referring to. As such, claim 5 is being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Similar problem exists in claims 14 and 15.

In regards to claim 18, lines 15-17 state:

"transmitting said at least one RLP frame, wherein a type of the voice RLP frame is designated by information included in a frame type field or a control field not used for data in the data RLP frame."

It is unclear as to which frame (voice RLP frame, data RLP frame or one RLP frame) the limitations "a type of the voice RLP frame is designated by information included in a frame type field or a control field not used for data in the data RLP frame." As such, claim 18 is being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to claim 26, lines 6-9 state:

"...the voice and data RLP frames are multiplexed and simultaneously transmitted together in an RLP frame based on outputs of the voice RLP module and data RLP module, wherein a frame type field or a control field not used for data in the data RLP frame is used to designate a type of the voice RLP frame".

It is unclear as to which frame (voice RLP frame, data RLP frame or an RLP frame) the limitations "a frame type field or a control field not used for data in the data RLP frame is used to designate a type of the voice RLP frame" is referring to. As such, claim 26 is being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to claim 33, lines

"...wherein the voice and data RLP frames are multiplexed and simultaneously transmitted together in an RLP frame based on outputs of the voice RLP module and data RLP module, wherein a type of the voice RLP frame is designated using

information in a frame type field or a control field not used for data in the data RLP frame”.

It is unclear as to which frame (voice RLP frame, data RLP frame or an RLP frame) the limitations “a type of the voice RLP frame is designated using information in a frame type field or a control field not used for data in the data RLP frame” is referring to. As such, claim 33 is being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to claim 32, lines 10-12 state:

“designating a type of the voice RLP frame in a frame type field or a control field not used for data in a data RLP frame, wherein the voice and data RLP frames are multiplexed and transmitted in an RLP frame.”

It is unclear which frame (voice RLP frame, data RLP frame or an RLP frame) the limitations “designating a type of the voice RLP frame in a frame type field or a control field not used for data in a data RLP frame” are referring to. As such, claim 32 is being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claims 1-5, 7-15 and 17-33 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

4. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission

amounting to a gap between the necessary structural connections. See MPEP

§ 2172.01. The omitted structural cooperative relationships are:

It is unclear regarding the relationship between the limitations "a type of the voice RLP frame is designated by information included in a frame type field or a control field not used for data in the data RLP frame" and "performing SVD call processing that supports SVD service between mobile terminals and base stations by using a SVD service option, wherein performing said SVD call processing includes: providing said SVD service by transmitting or receiving voice and packet data simultaneously using at least one radio link protocol (RLP) frame after service negotiation is performed using the SVD service option, wherein providing said SVD service comprises: transforming a packet data frame into a data RLP frame; transforming a voice frame into a voice RLP frame; multiplexing the data RLP frame and voice RLP frame to form said at least one RLP frame; and transmitting said at least one RLP frame". As such, claim 1 is being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections.

5. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:

It is unclear regarding the relationship between the limitations "designating a voice RLP frame type using one or more bit combinations in a frame type field not used for data in a data RLP frame" and "performing SVD call processing that supports SVD

service between mobile terminals and base stations by using a SVD service option, wherein performing said SVD call processing includes: providing said SVD service by transmitting or receiving voice and packet data simultaneously using at least one radio link protocol (RLP) frame after service negotiation is performed using the SVD service option, wherein providing the SVD service includes: the voice RLP frame generated based on the voice data and the data RLP frame generated based on the packet data; multiplexing the data RLP frame and voice RLP frame to form said at least one RLP frame; and transmitting said at least one RLP frame." As such, claim 4 is being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections.

6. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:

It is unclear regarding the relationship between the limitations "designating a voice RLP frame type using one or more bit combinations in a control field not used for data in a data RLP frame, the voice RLP frame generated based on the voice data and the data RLP frame generated based on the packet data" and "performing SVD call processing that supports SVD service between mobile terminals and base stations by using a SVD service option, wherein performing said SVD call processing includes: providing said SVD service by transmitting or receiving voice and packet data simultaneously using at least one radio link protocol (RLP) frame after service



negotiation is performed using the SVD service option, wherein providing the SVD service includes: multiplexing the data RLP frame and voice RLP frame to form said at least one RLP frame; and transmitting said at least one RLP frame." As such, claim 5 is being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections.

Similar problem exists in claims 14 and 15.

7. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:

It is unclear regarding the relationship between the limitations "a type of the voice RLP frame is designated by information included in a frame type field or a control field not used for data in the data RLP frame" and "performing SVD call processing that supports SVD service through SVD request signaling message exchange, when SVD service is requested after packet data call setup between a mobile terminal and a base station is completed, wherein performing said SVD call processing includes: providing said SVD service by transmitting or receiving voice and packet data simultaneously using at least one radio link protocol (RLP) frame after service negotiation is performed through the SVD request signaling message exchange, wherein providing said SVD service comprises: transforming a packet data frame into a data RLP frame; transforming a voice frame into a voice RLP frame; multiplexing the data RLP frame and voice RLP frame to form said at least one RLP frame; and transmitting said at least one,

RLP frame". As such, claim 18 is being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections.

8. Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:

It is unclear regarding the relationship between the limitations "a frame type field or a control field not used for data in the data RLP frame is used to designate a type of the voice RLP frame" and "a voice radio link protocol (RLP) module to transform voice data into a voice RLP frame; and a data RLP module at a MAC sub-layer to transform packet data into a data RLP frame, wherein the voice and data RLP frames are multiplexed and simultaneously transmitted together in an RLP frame based on outputs of the voice RLP module and data RLP module". As such, claim 26 is being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections.

9. Similarly, Claim 33 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:

It is unclear regarding the relationship between the limitations "a type of the voice RLP frame is designated using information in a frame type field or a control field not

used for data in the data RLP frame” and “a voice radio link protocol (tLLP) module to transform a voice frame into a voice RLP frame; and a data RLP module at a MAC sub-layer to transmit packet data into a data RLP frame, wherein the voice and data RLP frames are multiplexed and simultaneously transmitted together in an RLP frame based on outputs of the voice RLP module and data RLP module.”

10. Similarly, Claim 32 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:

It is unclear regarding the relationship between the limitations “designating a type of the voice RLP frame in a frame type field or a control field not used for data in a data RLP frame” and “performing SVD call processing that supports SVD service between mobile terminals and base stations by using a SVD service option, wherein performing said SVD call processing includes: providing said SVD service by transmitting or receiving voice and packet data simultaneously using at least one radio link protocol (RLP) frame after service negotiation is performed using the SVD service option, wherein providing SVD service includes: transforming a voice frame into a voice RLP frame; wherein the voice and data RLP frames are multiplexed and transmitted in an RLP frame.”

### ***Response to Arguments***

11. Applicant's arguments, see pages 13-15 of the Remarks section, filed 6/4/2009, with respect to the rejections of the claims have been fully considered and upon further

review and consideration a new ground of rejections are presented in this office action.  
As such, any further response to Applicant's argument is moot.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SALMAN AHMED whose telephone number is (571)272-8307. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571)272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Salman Ahmed/

Examiner, Art Unit 2419